



To: Brian Duffy-WGGM USACE COR

CC: Mike Debenedictis, Amado Domingo, John Beckman – WGGM USACE; Nidal Azzam –USEPA HP

From: Rebecca Scarborough – Sevenson WGGM PHP

Date: February 04, 2010

RE: Scoping Survey Performed on Residence at 230 N. King Street

Sevenson performed a scoping survey on the 1st floor and basement areas of the residence at 230 N. King Street to determine the existing radiological conditions of the areas where Sevenson would either be accessing the residence to perform work or performing the actual remediation. A copy of the survey results has been attached to this document and is labeled as Attachment 1. This assessment was conducted on January 18th 2010. A majority of the data collected and used for this assessment was below the Permanent Fixed Structure and Brick Criterion listed in Table 1. However, the basement floor slab indicated elevated surface gamma measurements, and the window sill located on the west wall contains contaminated material.

This scoping survey concentrated on sample locations that would have a more than reasonable chance to identify contamination. These locations included but were not limited to the floor area and walls of the 1st floor and basement; flat horizontal surfaces (window sills) where dust may accumulate; ceiling areas and rafters, etc. A total of 49 data points were collected with 1-minute static counts and smears. A 100 percent surface gamma scan of exposed areas in the basement was conducted with a 2-inch by 2-inch Sodium Iodide scintillation detector.

The counts per minute (cpm) to microR per hour (μ R/hr) conversion factor for the instrument utilized for these surveys is 929 cpm is equal to 1 μ R/hr.

Based on the results of the surveys an additional area of contamination was identified in the basement area. The window sill on the west wall exhibits gamma exposure dose rate of 76 μ R/hr and a direct beta measurement of 15,200 dpm/100cm². Both of these measurements are in excess of both the sites requirements for release using the Permanent Fixed Structure criteria and the EPA criteria of 20 μ R/hr above background for any occupied or habitable building 40CFR192.12(b)(2) for interior investigation and remediation. There are several areas of the basement floor slab that are either between the lower (14,000 cpm) and upper (18,800 cpm) trigger limits for the Welsbach project and at least one area that exceed the upper contamination trigger limits for surface

gamma scans. However, the gamma measurements from the basement are below the 27 $\mu\text{R/hr}$ limit established by EPA.

Table 1

Ref. Doc.		Radiation Type	Average dpm/100 cm²	Removable dpm/100 cm²	Total dpm/100 cm²
ROD 07' 1999	Permanent Fixed Structure	Alpha (α)	NA	57	570
		Beta (β)	NA	86	855
	Brick Only	Alpha (α)	NA	13	136
		Beta (β)	NA	323	3239

PHP Review / Date:

PHP Review / Date:

230 North King, First Floor	Project #: G-249
α Removable: 57 dpm/100 cm ² , β Removable: 335 dpm/100cm ² ; α Total: 395 dpm/100 cm ² , β Total: 339 dpm/100cm ² ;	36 5% 36 3% 36 3%

Sevenson Environmental Services, Inc.
Welsbach / GGM Superfund Site
Survey Map

Property Address: 230 N. King St.

Property ID: 3870

Date: 1-15-10

Contractor: SES

Survey No.: WGGM-10-RRS-002

Survey Type: Scoping Survey (Floor)

Surveyor: L. Collins

INSTRUMENT/EQUIPMENT

Scaler/Ratemeter Model: 2360

Serial Number: 263874

Cal Due Date: 9-28-10

Probe Model: 43-93 Serial No. 283267

Cal Due Date: 9-28-10

Conversion Factor: NA

Instrument Background: 1 / 1789

Scaler/Ratemeter Model: _____

Serial Number: _____

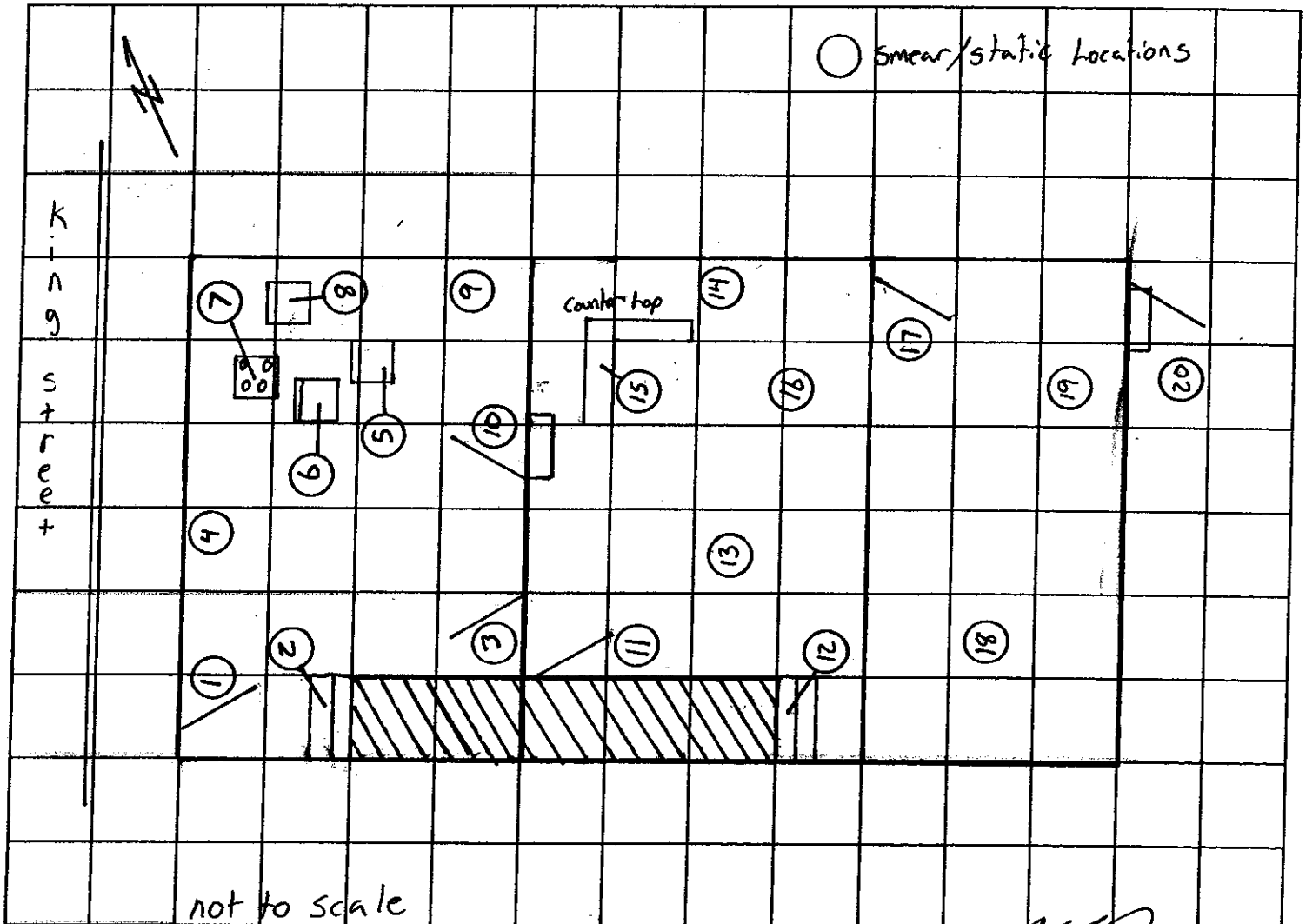
Cal Due Date: N

Probe Model: _____ Serial No. _____

Cal Due Date: A

Conversion Factor: _____

Instrument Background: _____



[Signature]
01/20/10

Sevenson Environmental Services, Inc.
Welsbach / GGM Superfund Site
Survey Map

Property Address: 230 N. King St.Property ID: 3870Date: 1-18-10Contractor: SE S**INSTRUMENT/EQUIPMENT**Scaler/Ratemeter Model: 2360Serial Number: 225229Cal Due Date: 6-6-10Probe Model: 43-93 Serial No. 236994Cal Due Date: 6-6-10Conversion Factor: N/AInstrument Background: 19/2301Survey No.: WGGM-10-RRS- 004Survey Type: Scoping Survey, direct, smear (walls)

Surveyor: _____

Scaler/Ratemeter Model: _____

Serial Number: _____

Cal Due Date: _____

Probe Model: _____ Serial No. ACal Due Date: N

Conversion Factor: _____

Instrument Background: _____

North and West Basement Walls

○ smear/static locations

West wall

North wall

15

14

11

10

8

Electrical box

6

4

2

6'

Fuel tank

1

13

12

9

7

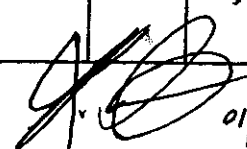
5

3

14'

25'

not to scale

 01/20/10

Sevenson Environmental Services, Inc.
Welsbach / GGM Superfund Site
Survey Map

Property Address: 230 N. King St.Property ID: 3870Date: 1-18-10Contractor: SESSurvey No.: WGGM-10-RRS- 004Survey Type: Scoping Survey, Manual Scans (walls)Surveyor: L. Collins**INSTRUMENT/EQUIPMENT**Scaler/Ratemeter Model: 2221Serial Number: 216514Cal Due Date: 3-24-10Probe Model: 44-10 Serial No. 227363Cal Due Date: 3-24-10Conversion Factor: N/AInstrument Background: 8438 cpm

Scaler/Ratemeter Model: _____

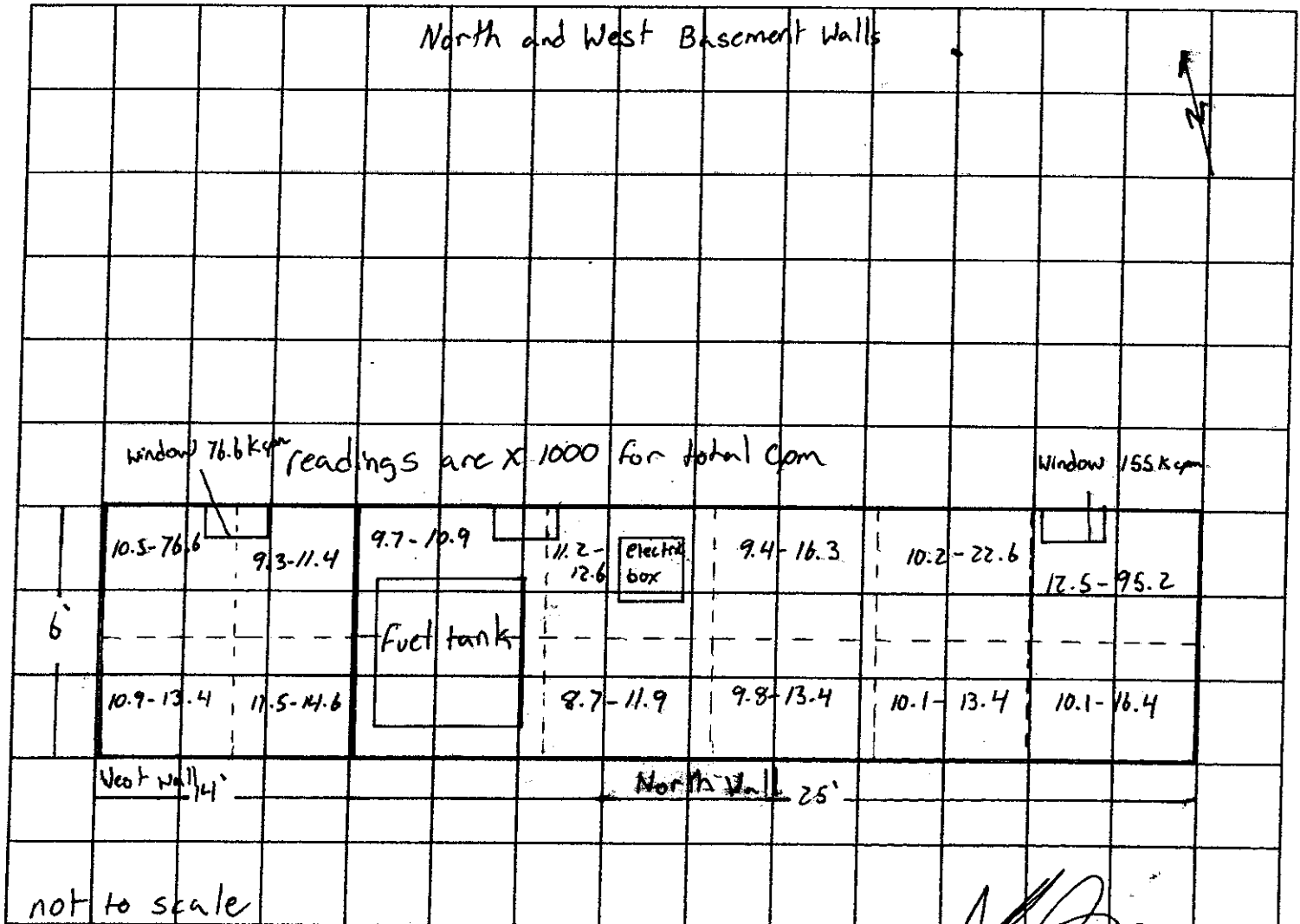
Serial Number: _____

Cal Due Date: _____

Probe Model: _____ Serial No. ACal Due Date: N

Conversion Factor: _____

Instrument Background: _____



[Signature]
 01/20/10

Sevenson Environmental Services, Inc.

Welsbach / GGM Superfund Site

Survey Map

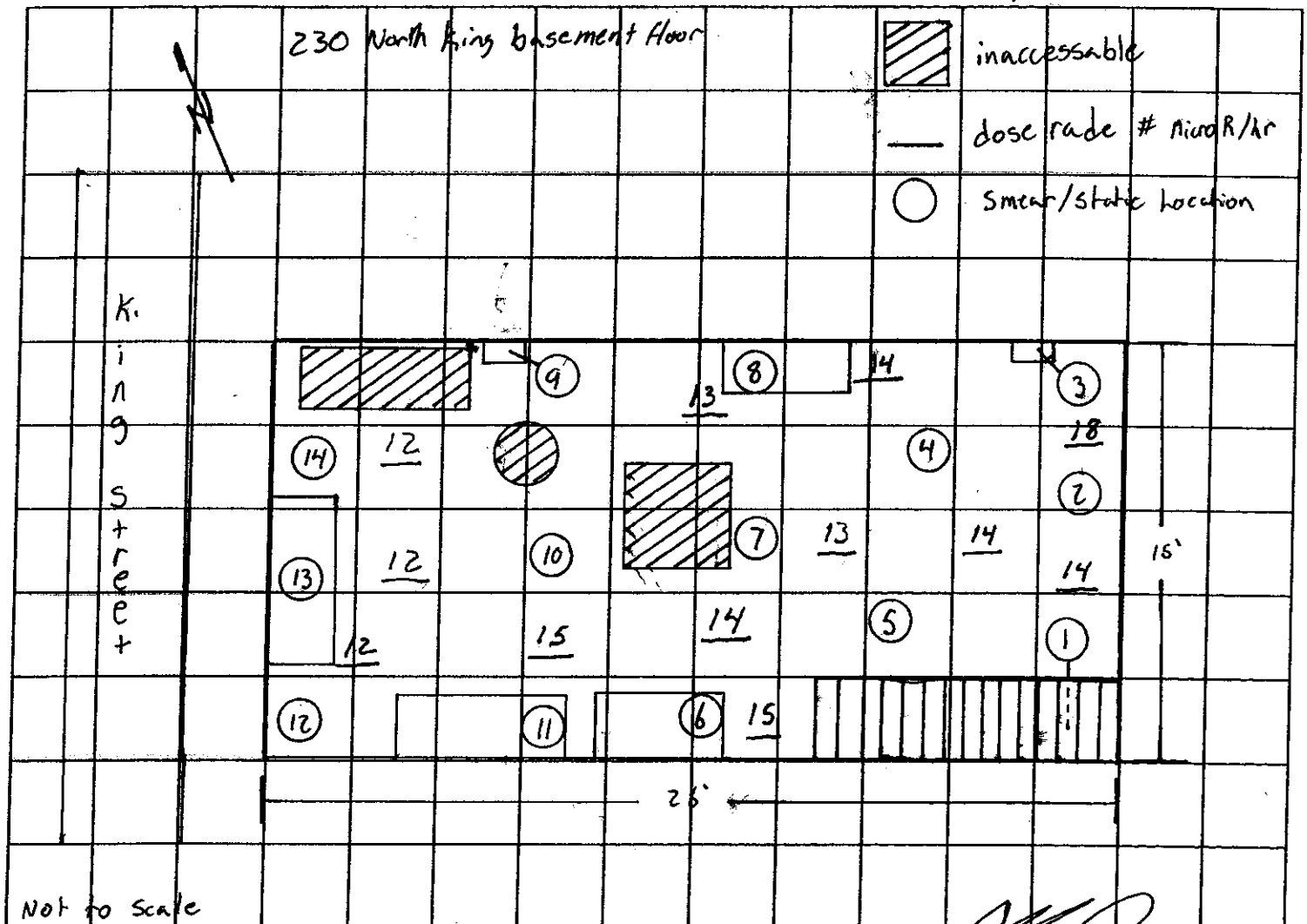
Property Address: 230 N. King St.
 Property ID: 3870
 Date: 1-18-10
 Contractor: SES

Survey No.: WGGM-10-RRS- 003
 Survey Type: Scoping survey, direct, dose rate
 Surveyor: L. Collins

INSTRUMENT/EQUIPMENT

Scaler/Ratemeter Model: 2360
 Serial Number: 225229
 Cal Due Date: 6-6-10
 Probe Model: 43-93 Serial No. 236994
 Cal Due Date: 6-6-10
 Conversion Factor: N/A
 Instrument Background: 19 / 2301

Scaler/Ratemeter Model: Model 19
 Serial Number: 265207
 Cal Due Date: 9-29-10
 Probe Model: internal Serial No. N/A
 Cal Due Date: N/A
 Conversion Factor: N/A
 Instrument Background: 12 uR/hr



[Signature] 01/20/10

Sevenson Environmental Services, Inc.

Welsbach / GGM Superfund Site

Survey Map

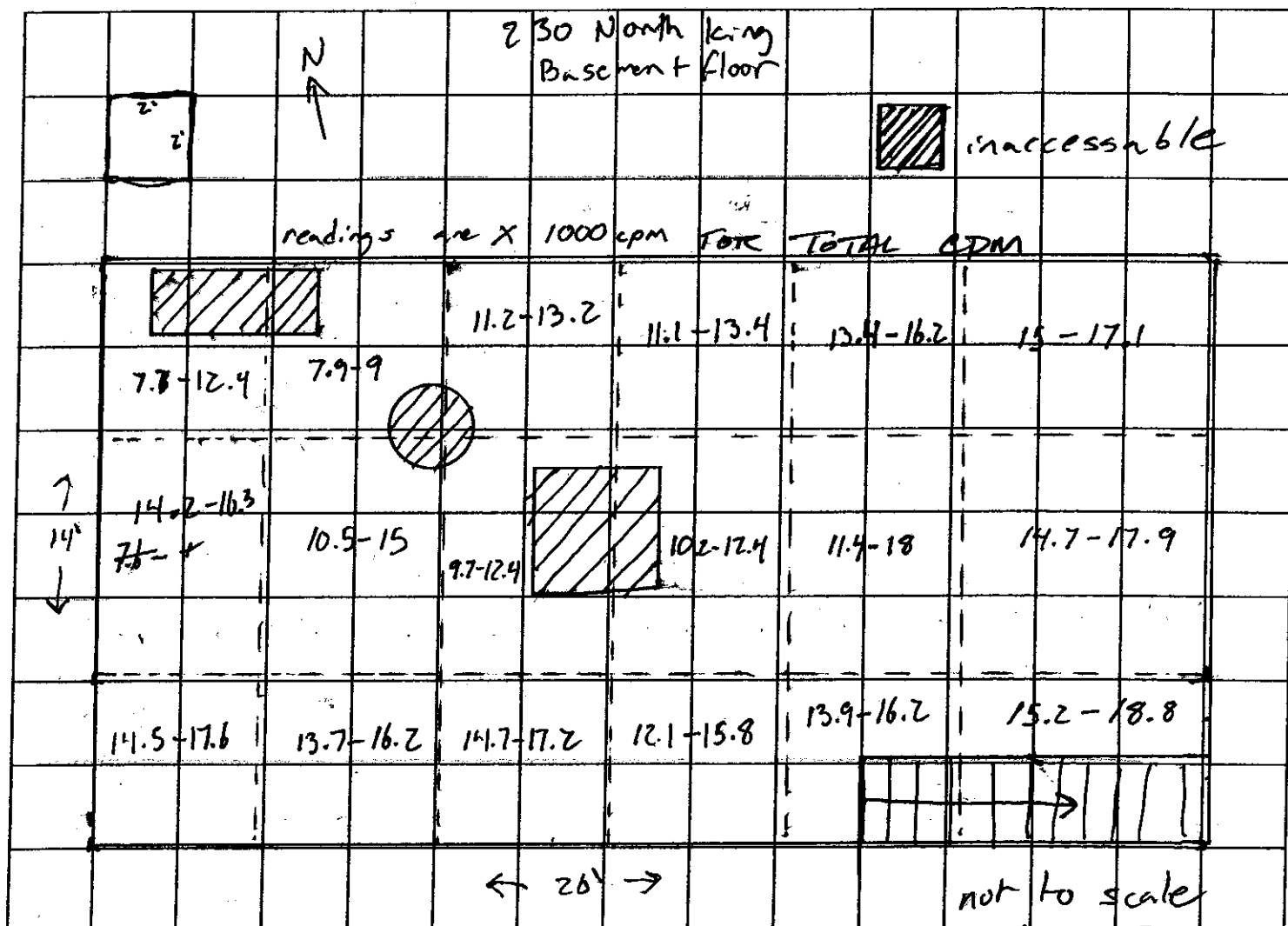
Property Address: 230 N. King
 Property ID: 3870
 Date: 1-18-10
 Contractor: SES

Survey No.: WGGM-10-RRS-003
 Survey Type: Scoping Gamma Survey (Floor)
 Surveyor: L. Collins

INSTRUMENT/EQUIPMENT

Scaler/Ratemeter Model: 222 / 44-10
 Serial Number: 216 514 / 227363
 Cal Due Date: 3-24-10
 Probe Model: 44-10 Serial No. 227363
 Cal Due Date: 3-24-10
 Conversion Factor: N/A
 Instrument Background: 8438 cpm

Scaler/Ratemeter Model: _____
 Serial Number: _____
 Cal Due Date: _____
 Probe Model: _____ Serial No. 4
 Cal Due Date: N
 Conversion Factor: _____
 Instrument Background: _____



$$3/8 = 1/0$$
 $25'-3$
$$K = 1000$$
